



# UNITED STATES PATENT AND TRADEMARK OFFICE

W  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,135	12/11/2001	Sewa S. Sandhu	H0003451	6634
128	7590	10/17/2003	EXAMINER	
HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245			KEASEL, ERIC S	
			ART UNIT	PAPER NUMBER
			3754	
DATE MAILED: 10/17/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/014,135	SANDHU ET AL.
Examiner	Art Unit	
Eric Keasel	3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 20 August 2003.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-17 and 25-35 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-17 and 25-35 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 03 April 2002 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)      4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_ .

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 and 7.      6) Other: \_\_\_\_\_ .

**DETAILED ACTION**

1. The office acknowledges the cancellation of claims 18-24 along with the election without traverse of Group I (claims 1-17 and 25-35).

*Drawings*

2. The drawings are objected to because all arrows showing the direction of sight of the sectional views are wrong. For example, in Fig. 1, the arrows for sectional views 2 and 3 would appear to indicate that the direction of sight of both Figs. 2 and 3 are both the same (i.e. into the inlet 108). However, The direction of sight of Figs. 2 and 3 are clearly at right angles to each other because the shaft 110 is shown to lengthwise holding the disk in Fig. 2, whereas the shaft 110 is shown to be going into the paper in Fig. 3. All other sectional views are wrong also. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. Applicant is encouraged to review 37 CFR 1.84(h)(3).

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "interleaved metallic strands" (claim 28) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

4. The disclosure is objected to because of the references to the various sectional views are incorrect. Appropriate correction is required.

***Claim Objections***

5. Claim 7 is objected to because of there is no period at the end of the claim. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-12 and 25-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are replete with errors too numerous to mention specifically. The following noted informalities are merely exemplary thereof.

Claim 1, line 5, recites "at least one control arm" allowing for one or more than one control arms. However, claim 1, line 6, recites "each control arm" requiring two or more. It is vague and indefinite as to whether the claim limitations allow for only one control arm. Claim 25 has similar problems.

Claim 1, line 7, recites "for biasing the valve toward the closed position". It is unclear whether applicant really intends for this to be the valve (i.e. the valve of line 1 which comprises all of the elements in the claim) or if line 7 should be --for biasing the valve disk toward the closed position--.

Claim 1, line 9, recites “at least one retainer”, and then recites in the same line “the retainer”. If there is more than one retainer, it is unclear which one is “the retainer”. Similarly, claim 1, line 12 recites “at least one cable having a first end and a second end”. It is unclear whether subsequent recitations to “the cable”, “the first end”, and “the second end” require “at least one cable” to be “exactly one cable”.

Claim 2 recites “a rotationally mounted pulley”. However, claim 3 (dependent on claim 2) recites “a pulley”, which may or may not be double inclusion of the pulley of claim 2. It is vague and indefinite as to whether there are recitations to two distinct pulleys or if the pulleys of claim 2 and claim 3 are meant to be the same pulley.

In claim 5, there is a word missing before “base”. It is unclear whether it should be --the base-- or --a base--.

Claim 33 appears to positively recite “at least one control arm”. However, a similar recitation in claim 25 appears to be an intended use recitation. It is unclear whether the “at least one control arm” of claim 33 is intended to be the same or different from the “at least one control arm” of claim 25 and it is also unclear whether these are positively recited elements or only intended uses for the kit.

In claim 34, “the biasing element” lacks antecedent basis. It appears to be a copy of claim 11; but it doesn’t make sense in the context of the subcombination kit.

In light of the above informalities, the claims have been examined as could best be understood by the examiner. The examiner’s failure to apply prior art to any of the claims should not be construed as an indication of allowable subject matter.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 13, 14, 17, 25, 26 (as understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Thomas (US Patent Number 4,790,206).

Thomas discloses a cable assembly (which is also an assembled kit) comprising a retainer (40 or 50) having a body with an opening in a first end thereof and an internal surface defining a cavity (48 or 62), the cavity extending from the opening a predetermined distance within the retainer; and a cable (42) having a first end and a second end, the first end adapted for coupling to a control arm (14) and the second end inserted through the opening and slidably retained within the retainer cavity (see Fig. 2), the second end moveable within the retainer cavity between the opening and a position along the predetermined distance of the cavity, wherein the opening of the retainer is configured to retain the second end therein; further comprising a first retaining ball (64) coupled to the first end of the cable; and a second retaining ball (54) coupled to the second end of the cable and operable to prevent the second end from being removed from its retainer opening; and wherein the opening of the retainer is not as wide as the width of the cavity.

10. Claims 25, 33, and 35 (as understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuge (US Patent Number 6,102,609).

Note, it is unclear what is meant by control arm in claims 25 and 33 and it is also unclear if the control arms are meant to be the same or different. The art is applied as follows. Tsuge discloses an assembled kit comprising at least one cable assembly (see Fig. 14), wherein each cable assembly comprises a retainer (J6) having a body with an opening in a first end thereof and an internal surface defining a cavity, the cavity extending from the opening a predetermined distance within the retainer; and a cable (J7) having a first end and a second end, the second end moveable within the retainer cavity between the opening and a position along the predetermined distance of the cavity, wherein the opening of the retainer is configured to retain the second end therein; further comprising at least one control arm (J1) including a main body portion; at least two arms extending from the main body portion substantially parallel with one another and spaced apart from one another to form a relatively smooth slot there between (see the portion where the cable is inserted into the slot in Fig. 14), each arm including an indentation collocated with the indentation in the other arm to form a retaining hole for receiving the retaining ball therein, wherein the retaining hole is dimensioned so as to allow the retaining ball to move within the retaining hole.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1-3, 5-9, 29, 30, and 32 (as understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al. (US Patent Number 2,830,521) in view of Thomas.

Fischer et al. disclose an air outflow valve, comprising a valve body (i.e. the housing), a butterfly valve disk (17) movably mounted on the valve body and moveable through a plurality of positions between a closed position and an open position, a control arm (21) coupled to the valve disk, a biasing element (26) coupled between the control arm and the valve body for biasing the valve toward the closed position (see column 2, lines 46 and 47), a control diaphragm (32) mounted within the valve body that isolates a first chamber (36) from a second chamber (37), a cable (38), a pulley assembly (40) mounted within the valve body, the pulley assembly

including a rotationally mounted pulley positioned to contact at least a portion of the cable when the cable is in tension, and a shaft (18) rotationally mounted within the valve body, wherein the valve disk/ butterfly plate is coupled to the shaft.

Fischer et al. fail to disclose the retainers and the details of the ends of the cables being balls that can move within the retainers. Thomas discloses a cable assembly comprising a retainer (40 or 50) having a body with an opening in a first end thereof and an internal surface defining a cavity (48 or 62), the cavity extending from the opening a predetermined distance within the retainer; and a cable (42) having a first end and a second end, the first end adapted for coupling to a control arm (14) and the second end inserted through the opening and slidably retained within the retainer cavity (see Fig. 2), the second end moveable within the retainer cavity between the opening and a position along the predetermined distance of the cavity, wherein the opening of the retainer is configured to retain the second end therein; further comprising a first retaining ball (64) coupled to the first end of the cable; and a second retaining ball (54) coupled to the second end of the cable and operable to prevent the second end from being removed from its retainer opening; and wherein the opening of the retainer is not as wide as the width of the cavity. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the cable assembly of Thomas with the valve of Fischer et al. in order to provide a lost-motion connection between the actuator and the valve as taught by Thomas.

13. Claims 15, 16, and 27 (as understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas as applied to claims 13 and 25 above, and further in view of Costantino et al. (US Patent Number 4,195,798).

Thomas fails to disclose the threads on an exterior surface of the retainer. Costantino et al. disclose threads on the exterior of a similar retainer that allows motion of the ball end of a cable within the interior of the retainer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have added the threads of Costantino et al. to the retainer of Thomas in order to allow the threads to be mated to numerous other threaded objects and to allow for adjustment of the threaded members as taught by Costantino et al.

14. Claim 28 (as understood) is rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas as applied to claim 25 above, and further in view of Taylor et al. (US Patent Number 5,702,433).

Thomas is silent as to the cable assembly comprising interleaved metallic strands. Taylor et al. disclose the use of interleaved lengths of stainless steel used in a similar cable (see column 4, lines 22-32). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the cable of Thomas with interleaved metallic strands in order to strengthen the cable and improve torque transmission as taught by Taylor et al.

15. Claims 4 and 31 (as understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al. in view of Thomas as applied to claims 3 and 30 above, and further in view of White, Jr. (US Patent Number 4,416,647).

The modified Fischer fails to disclose a sleeve bearing. White, Jr. discloses a sleeve bearing used with a similar pulley. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the sleeve bearing of White, Jr. with the valve of the modified Fischer in order to provide a bearing surface for the roll pin as taught by White, Jr.

***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jensen, Rannenberg, Rowland et al., and Goodman disclose similar valve structure. Carlson, Woltz et al., and Muller disclose similar cable structure.
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Keasel whose telephone number is (703) 308-6260. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (703) 308-2696. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

*Eric Keasel 15 OCT 03*  
Eric Keasel  
Examiner  
Art Unit 3754